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4,758,366	7/1988	Parekh	252/68
5,149,453	9/1992	Parekh	252/68
5,167,867	12/1992	Quaife et al.	252/408.1
5,279,967	1/1994	Bode	436/56
5,357,782	10/1994	Henry	73/40.7

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## [57] ABSTRACT

The present invention relates to the effective leak detection of refrigerants by the addition of dyes from the general chemical class of naphthalimide fluorescent dyes in a refrigeration system where said refrigeration system employs alone, or in combination, a refrigerant in a hermetic system such as, but not limited to, chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC) and any hydrogen, halogenated or ether derivatives of the methane, hydrogen, halogenated, ether or cyclic derivatives of either ethane, propane, butane, pentane, mixtures of HCFC, HFC, hydrocarbons, carbon dioxide and ammonia.

Leakage is determined by inspection of the sealed system using a lamp having an emission wavelength from 300 to 480 nanometers providing an indication of any system leakage.

15 Claims, No Drawings